

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

_____)	
In the Matter of)	
)	
Telecommunications Relay Services,)	CC Docket No. 98-67
and Speech-to-Speech Services for)	
Individuals with Hearing and Speech)	
)	
_____)	

REPLY COMMENTS OF ULTRATEC, INC.
Petition for Clarification
Provision of and Cost Recovery for CapTel, An Enhanced VCO Service

Pamela Y. Holmes, Director
Consumer & Regulatory Affairs
Ultratec, Inc.
450 Science Drive
Madison, WI 53711
(608) 238-5400 Voice/TTY
pam.holmes@ultratec.com

Table of Contents

Summary.....	4
I. Consumers Who Have Submitted Comments to This Proceeding Have Expressed Overwhelming Support For CapTel.....	5
II. CapTel Has Many Advantages Over Current VCO Offerings and Should Be Recognized as an Enhanced Version of VCO Under 47 C.F.R. §64.601(9).....	10
III. Comments to This Proceeding Illustrate The Many Advantages of CapTel	12
A. Benefits of Direct Dial.....	12
B. Having Full Control of One’s Own Call.....	12
C. Improving Relay for Existing Users/Expanding the Relay User Population.....	13
D. Achieving Faster, More Efficient Communications – Closer to Functional Equivalency.....	14
E. Achieving a More Natural Conversation Flow With CapTel.....	14
F. Achieving Functional Equivalency for Calls to Interactive Menus and Voice Mail Messages.....	15
G. Access to a More Efficient Telecommunications Employment Tool	17
IV. CapTel Trials Demonstrate High Customer Acceptance and Compliance With Applicable FCC Minimum Standards.....	18
A. Ten CapTel Trials Are Now Underway or Scheduled to Begin...	18
B. CapTel Trials Demonstrate High Words Per Minute (wpm) Accompanied by Low Error Rates.....	19
C. CapTel Communications Assistants Meet or Exceed All Applicable Minimum FCC Standards of CA Quality.....	20
V. Ultratec Supports Comprehensive Consumer Education on the CapTel Service.....	21
VI. Minimum Mandatory Standards Not Applicable to CapTel Should Be Waived.....	22

A. Mandates Related to Speech-to-Speech, Video Relay Services and Hearing Carry Over Services are Not Applicable to CapTel Services....	22
B. 711 Dialing Requirements.....	23
VII. Conclusion.....	24

Summary

Parties who commented during the Federal Communications Commission's (FCC) pleading cycle initiated on June 26, 2002, have expressed overwhelming support in favor of Ultratec's Petition to permit the provision and reimbursement of "Captioned Telephone" ("CapTel"), as an enhanced Voice Carry Over (VCO) service. With this considerable outpouring of public support for CapTel, the FCC should take prompt action and issue a declaratory ruling allowing CapTel as a reimbursable TRS offering. This action clearly would be in the best interest of the public affected and within the Commission's jurisdiction. Consumer comments have explicitly conveyed how CapTel can greatly enhance the relay experience for current VCO users, as well as serve an underserved segment of the relay user population.

With the considerable record supporting initiation of CapTel as a relay service, Ultratec requests that the Commission permit CapTel services to be eligible for TRS funding reimbursement. The CapTel service offers a highly advanced technological solution that can assist the Commission in its quest to achieve telephone functional equivalency for individuals with hearing disabilities. CapTel has now been trialed in three states and the Federal Relay with six new states beginning trials this year and early in 2003. Ultratec requests that the Commission issue a ruling that (1) classifies CapTel service as a relay service that is eligible for the recovery of costs associated with its provision, and (2) clarifies that certain Commission requirements for TRS are not applicable to CapTel. Ultratec believes, and we expect the Commission will concur, that the record in this proceeding illustrates that the public will be best served by access to this new TRS offering.

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

<hr/>)	
In the Matter of)	
)	
Telecommunications Relay Services,)	CC Docket No. 98-67
and Speech-to-Speech Services for)	
Individuals with Hearing and Speech)	
)	
<hr/>)	

REPLY COMMENTS OF ULTRATEC, INC.
Petition for Clarification
Provision of and Cost Recovery for CapTel, An Enhanced VCO Service

I. Consumers Who Have Submitted Comments to This Proceeding Have Expressed Overwhelming Support For CapTel

On June 26, 2002, the Federal Communications Commission released a public notice soliciting comments on a petition filed by Ultratec with respect to the provision of and cost recovery for Captioned Telephone (CapTel).¹ The comments to date have been overwhelmingly in support of CapTel as a TRS offering. Specifically, over ninety consumer commenters have expressed great enthusiasm and desire for this service; most have made clear their desire to have CapTel reimbursed by TRS funds.

¹ Pleading Cycle Established for Comment on Petition for Clarification on the Provision of and Cost Recovery for Captioned Telephone as an Improved Voice Carry Over Service for Telecommunications Relay Service, CC Dkt. No. 98-67, DA 02-1490 (June 26, 2002). Ultratec's petition had been filed on April 12, 2002.

Consumers who have used CapTel point out that because captions are generated using voice recognition technologies specifically designed for TRS, the result is near-real time transcription of the call, i.e., the CapTel displays word-for-word text of everything the called person says.² One commenter expresses, “[t]he best part of the CapTel experience was that, finally, I could “see” what the person at the other end was saying, practically simultaneously, and I could respond by merely saying something into the telephone receiver!”³

Those who have experienced CapTel calls note that unlike existing one-line VCO, users can *listen* to the called person’s voice while reading a transcription on the CapTel’s built-in display. CapTel users can use any residual hearing they have to hear over the phone, and read the captions if they need clarification.⁴ Heppner mentions that she “likes being able to hear the voice of the person [she is] calling but having a safety net of being able to read captions for words [she] does not understand.” Priola, McChesney, and Judge Brown along with others note they are cochlear implant users and love how CapTel reinforces what they are listening to on the phone with caption support. Kerschbaum declares that with CapTel she “can now hear affect, tone of voice, emotions, sarcasm, anger, laughter, responses, ums and uhs” and can even make sense of the silences that take place, which she can’t experience with standard one-line VCO.

Ott-Mendiola points out the simple joy of basic yet telling sounds on the line. “It is wonderful to hear other people laughing on the other end of the line, and others have said the same about hearing me laugh.” Webb cites the value of hearing voice inflection via the

² “Very Important!” expressed one commenter. This individual added, “[y]ou can also read live, word-for-word captions of everything the other person says for added clarity.” Newsome Comments at 1.

³ Slotnick Comments at 1.

amplified capabilities of CapTel, despite not being able to discriminate speech fully. She further points out that with CapTel she can decide on her own if the other party “sounds mad” or is “in a hurry.” Wilson, another cochlear implant recipient, summarizes her experience well: “Being able to hear the person I am calling makes my phone calls a much more pleasant experience. I can understand some of what is being said ... but if I miss something, it is right there for me to read. And also, I do not need to keep saying, “Go Ahead.”

CapTel supporters also point out that throughout CapTel calls, the CA is completely transparent though ever present, does not ‘participate’ in the call in any way, nor interrupt the parties to ask one to slow down or repeat. Ott-Mendiola notes that “[o]ne advantage of CapTel is the third party is never obvious” making the call for others more comfortable. SHHH confirms, “the beauty of CapTel is the invisibility of the CapTel agent.” The CA is ever present transcribing the call, yet is not heard nor spoken to. Consumers repeatedly state that CA transparency is a *significant* benefit of CapTel.⁵

Gould points out the clear advantage of CapTel: “Many times I can hear the person clear enough to understand, and if I can’t, then the captions are right there if I need them. It is faster than two-line VCO and much less expensive. I can use it at home even though I live in an area where I can not get 2 phone lines or 3 way calling.” Judge Brown agrees, CapTel is “much cheaper” [than two line VCO], “much faster” and “the conversation is less cumbersome, more natural, and far more efficient.”⁶ Brown goes on to conclude that CapTel “will give people with hearing disabilities the same conveniences afforded normal hearing persons. If ADA means anything, it means equal

⁴ See, e.g., Comments of Gould, Dishno, Webb, Chen, Krpata, Willey, Wilson, Brown, Dickinson, Rinehart, Heppner, Rehbeck, Priola, McChesney, Lange, Ott-Mendiola, Newsome, Judge Brown, SHHH, et al.

⁵ Finn at 1.

access. This technology helps persons with disabilities to achieve that goal.” A sampling of many of the other consumer submissions to the FCC in this proceeding similarly reflect the extraordinary sentiment in favor of the CapTel service:

- ... “It is truly remarkable...this certainly is the breakthrough of the decade.”
(Brenneman, Federal Relay Trial Participant)
- ... “[I am]...in awe at how well it worked” while trying CapTel at the SHHH Convention
(Johnson, Director, Texas SHHH State Office)
- ... “The people I have communicated with think this is wonderful technology.”
(Gates, Federal Relay Trial Participant)
- ... “It has worked wonderfully for me... and has given me the freedom to make phone calls without others feeling uncomfortable.” (Rinehart, WI Trial Participant)
- ... “The overall quality is superior to traditional relay, with or without VCO.” (Viera)
- ... “What a wonderful invention this is.” (Wilson, WI Trail Participant)
- ... “This CapTel service is what I have been begging for...”
(Derus, WI Trial Participant)
- ... “This type of phone is what I have been looking for over 30 years. It is a wonderful device for those of us who have good speech but cannot hear well over the phone.”
(Wells, TX)
- ... “I have been using this wonderful captioned telephone since March in my home and it has been a lifesaver! ... remarkable technology!” (Amann, MD Trial Participant)
- ... “CapTel has drastically improved the quality of my life. I compare this to when [t]elevision started to close caption their programs back in the ‘80s-it was that great!” (Harrell, Federal Relay Trial Participant)
- ... “Using CapTel phone has improved my telephone usage by 200%”...the CapTel “has made our lives so much easier than we had experienced in the past.”
(Mr. & Mrs. Schiro, WI Trial Participants)
- ... “CapTel is the type of phone communication that I have greatly longed for due to the difficulty and expense of trying to use two-line VCO relay systems.” (Klein)
- ... “I use the CapTel at both home and work. I can honestly say I enjoy using the

⁶ Judge Richard Brown, A WI CapTel Trial participant previously relied on two-line VCO user. His comments give 8 simple reasons he no longer uses 2 phone lines and uses CapTel instead.

- telephone again. It saves me so much time.” (Webb, MD Trial Participant)
- ... “You wouldn’t believe how easy it has become for me to just pick up the phone and place a call without hesitation.” (K. Smith, WI Trial Participant)
- ... “I am extremely pleased with the opportunity to make telephone calls and not [be] subject to lengthy relay calls.” (Ott-Mendiola, Federal Relay Trial Participant)
- ... “I could say nothing but “super” to CapTel.” (Chen, Federal Relay Trial Participant)
- ... “Talked with a friend of mine [via CapTel], and he was flabbergasted that we would almost have a real conversation between us.” (Pecoraro, Federal Relay Trial Participant)
- ... “I don’t understand why someone would force me to use a second grade service when the CapTel service is superior...I love being able to hear someone else’s voice and yet be able to read to understand what the person was saying.” (Dishno, WI Trial Participant)
- ... “It would take many pages for me to adequately express what a huge difference this has made in my life. It has been absolutely wonderful and as a trial user, I have reaped the rewards of this technology...CapTel is a lifeline to me.” (Helen Rizzi, WI Trial Participant)
- ... “It is a blessing for me, I can communicate with my daughters without having to say *what* all the time.” (Bredeson, WI Trial Participant)
- ... “I live alone and can’t always find someone to make phone calls for me, but with CapTel I can read what the person on the other line is saying-please don’t discontinue this marvelous service.” (Davis, MD Trial Participant)
- ... “I am an unabashed fan of CapTel...I now find that I really could not do without my CapTel. It is the greatest invention since the cochlear implant! It should be cleared for unlimited consumer use.” (Judge R. Brown, WI Trial Participant)
- ... “Why should the deaf be without modern technology? Why should the deaf be held back in communications? Much needed technology like the CapTel – serves a big purpose!” (Mosher, Federal Relay Trial Participant)

In addition to individual commenters, national organizations representing people who are deaf and hard of hearing have expressed support for the provision of and reimbursement for the CapTel service. For example, Self Help for Hard of Hearing Individuals, Inc. (SHHH) describes CapTel as “a potential breakthrough for VCO users ... CapTel, an innovative VCO, is exciting and opens up a more natural, functionally equivalent way for people with residual

hearing and speech to use relay.”⁷ Similarly, Telecommunications for the Deaf, Inc. (TDI) affirms: "The CapTel services described in Ultratec's petition represent a significant step forward in meeting the goals of Title IV of the Americans with Disabilities Act (“ADA”) to bring about true, real-time TRS calls that are functionally equivalent to traditional voice communication services. As such, they should qualify as a telephone transmission service that is eligible to receive reimbursement from the interstate TRS fund managed by the National Exchange Carrier Association.”⁸

II. CapTel Has Many Advantages Over Current VCO Offerings and Should Be Recognized as an Enhanced Version of VCO Under 47 C.F.R. §64.601(9)

Ultratec’s original petition asks that CapTel be recognized as an enhanced version of VCO. Parties to this proceeding concur that CapTel should, in fact, be classified as an enhanced form of VCO. Hamilton Relay describes CapTel as “an enhanced version of Voice Carry Over (VCO) service that merits speedy approval for cost recovery” and “as a “functionally equivalent” relay service advancing the objectives of Title IV of the Americans with Disabilities Act (ADA).”⁹ In addition, Sprint agrees with nearly all commenting parties that Ultratec’s petition should be granted. Sprint adds, “[t]his service is a technologically advanced and innovative offering that provides users with residual speech and limited hearing near-functional equivalence with conventional voice service.”¹⁰ Other commenters note the many advantages that CapTel

⁷ SHHH at 2, and 4. SHHH mentions in their comments that CapTel’s ability to provide text in synchronicity with the voice of the original speaker is not perfected yet. Ultratec acknowledges that text and speech are not completely simultaneous. There will always be a slight delay due to the CA’s need to re-voice the other party’s spoken words into the computer, which then translates and transcribes the speech into transmitted text to the CapTel’s display.

⁸ TDI at 1.

⁹ Hamilton Relay, Inc at 1.

¹⁰ Sprint at 1.

offers over standard VCO. For example, numerous commenters concur that standard VCO does not allow the individual with a hearing disability to make use of his or her residual hearing to hear what he or she can of the other party's spoken dialogue and environmental sounds.¹¹ Dickinson shares that VCO "is very time consuming and forces individuals like myself who are profoundly deaf but can speak, to labor through phone calls appearing far more disabled to our telephone contacts than necessary."

Many current CapTel trialists who submitted comments note they were previously two-line VCO (2LVCO) users, but note as well that 2LVCO has considerable limitations. They point out that unless the user purchases two phone lines and conference calling capabilities, current VCO technology prevents an individual with residual hearing from benefiting from voices and environmental sounds on the line. SHHH explains why 2LVCO is not suited well for many consumers: "Under existing relay conditions, achieving the same VCO capability (hearing and reading together), as CapTel, requires two phone lines, three-way calling, the savvy to set it up, and the cognitive ability to manage this complicated process quickly before the call is disconnected . . . For many people, 2LVCO is not an option either due to cost, lack of technological know-how, or the cognitive ability to manage the call."¹² CapTel's nearly simultaneous transmission of both voice and text over one telephone line simplifies use of enhanced VCO and enables the CapTel user to hear the other party and any background noises.

III. Comments to This Proceeding Illustrate The Many Advantages of CapTel

A. Benefits of Direct Dial

¹¹ See, e.g., Comments of Pecoraro, Dickinson, Priola, Kerschbaum, Byington, Ott-Mendiola, Gould, Dishno, Webb, Chen, Krpata, Willey, Wilson, W. Brown, Rinehart, Heppner, Rehbeck, Lange, R. Brown, and SHHH.

¹² SHHH at 1-2.

A significant advantage of CapTel that is cited in several comments is the benefit of “dial-through.”¹³ Parties who commented on this feature note that “dial-through” eliminates the time and burden of having to set up a call through the CA by allowing the CapTel user simply to dial the number of the person being called. Commenters specifically note that they love being able to dial directly the number they are calling, because it is more time efficient and makes them feel like *they* own the call.

B. Having Full Control of One’s Own Call

Having full control over one’s own call – although seemingly logical – has been somewhat lacking in existing relay offerings. Several commenters express their appreciation for the ability to maintain their own control of CapTel calls.¹⁴ Viera states, “I feel as if I am as much in control of my side of the conversation as I used to be when I could hear . . .” Smith agrees, “This unique system granted me more control over my phone calls.” Mauldin concurs, “CapTel allows me to control the call.” Gould

¹³ Schiro, Wilson, Heppner, Gates, Rizzi, SHHH.

¹⁴ Gould, Heppner, Mauldin, Smith, Viera, Webb

acknowledges, “It has made my daily life much easier and gives me direct control over my phone calls.” Heppner agrees, “Being able to dial the number of the person I want to reach directly and having the CapTel take care of the rest makes me feel much more like I own the call.”

C. Improving Relay for Existing Users/Expanding the Relay User Population

In the Further Notice of Proposed Rulemaking accompanying its Improved Services Order of March 2000, the Commission acknowledged the considerable interest of consumers in new, technically feasible technologies to achieve functionally equivalent relay service, and sought further comment on these technologies.¹⁵ By allowing an advanced new technology such as CapTel to be fully recognized as a reimbursable TRS service, the Commission will be taking action wholly consistent with its dual goals of improving TRS for those who already use this service, and of promoting an enhanced form of relay that can reach those who are not yet fully served by Title IV of the ADA.

Numerous comments to this proceeding illustrate how CapTel improves relay for existing users and expands the reach to others not yet served.¹⁶ SHHH notes that the need for an improved VCO is great.¹⁷ Similarly, Priola, President of Rappahannock SHHH Chapter and an Outreach Coordinator for individuals who are deaf or hard of hearing, states, CapTel “is so easy for people to learn to make use of compared to the Voice Carry Over Phone. This will help our senior citizens that are dealing with hearing loss stay in contact with their community.”

¹⁵ In the Matter of Telecommunications Relay Services and Speech to Speech Services for Individuals with Hearing and Speech Disabilities, Report and Order and Further Notice of Proposed Rulemaking, CC Dkt. No. 98-67, FCC 00-56 at ¶138 (March 6, 2000) (Improved Services Order).

¹⁶ See e.g., Comments of Schiro, Chen, Webb, Bishop, Dickinson, Johnson, Brown, Willey, Krpata, Slaasted, Schneider, Swoverland, Bredeson, Rizzi, McChesney, Priola, Robbins, Ott-Mendiola, TDI, and SHHH.

D. Achieving Faster, More Efficient Communications – Closer to Functional Equivalency

Many parties to this proceeding agree that allowing CapTel to be a reimbursable relay service will bring the Commission one step closer to meeting its goal of functionally equivalent relay services by offering faster, more efficient calling opportunities for current and potential VCO users.¹⁸ Dickinson states, “the speed of CapTel is phenomenal and allows us to conduct calls efficiently.” Priola, Gates, Gould, Schiro, Kerschbaum, Judge R. Brown and others concur that the CapTel service is considerably faster than ordinary relay. Gates adds, “The live captions are great and contain very few, if any mistakes.”

SHHH concurs that, “CapTel moves VCO towards functional equivalence for people who prefer VCO and use it.” According to SHHH, “CapTel is not so much a new relay service as a more functionally equivalent way of providing VCO, with a direct connection feature and voice and text over one line.”¹⁹

E. Achieving a More Natural Conversation Flow With CapTel

Commenters report that with CapTel, relayed conversations flow more naturally for the hearing party to whom they are speaking.²⁰ According to SHHH, “[w]ith CapTel the hearing party might not even realize the call is being made through relay, the conversation flow is natural, and that brings us closer to functional equivalence.”²¹ Lange offers he can now “carry on a normal conversation for the first time in years!”

¹⁷ SHHH at 1.

¹⁸ Schiro, Gould, Harrell, Brennenman, Wilson, Brown, Dickinson, Heppner, Gates, Priola, Kerschbaum, Rizzi, Mosher, Thorne, Berry, SHHH, and TDI.

¹⁹ SHHH at 1-2.

²⁰ *See e.g.*, Comments of Viera: “With relay service, I have always been most concerned about the experience of the hearing party at the other end of the line. Conversations need to be as comfortable and appropriate for that person as it is for me and both of us need to be able to project ourselves to the same degree we would if I could hear. CapTel is a way to achieve this goal.”

Kerschbaum shares the fact that “others appreciate being able to interject and respond and have a normal conversation flow in the conversation. They like that I can understand short bits of the conversation myself and respond quickly, and they appreciate not having to artificially stop every sentence with “Go Ahead” or having to be completely silent while the other person is talking.”

Hamilton Relay explains how CapTel achieves a natural conversational flow: “Because the service “feels” more like using conventional voice telephone service, with direct dialing of the called party’s number and simultaneous delivery of the actual voice and the written version generated when the CA re-voices the message, it is less intrusive and more “natural” for the call participants. Both existing relay users and new customer groups benefit.”²² Thorne confers, “Having this phone has restored my confidence in my ability to use the phone.”

F. Achieving Functional Equivalency for Calls to Interactive Menus and Voice Mail Messages

In its Improved Services Order, the Commission concluded that in order to be functionally equivalent, TRS must provide consumers with hearing and speech disabilities access to interactive phone menus and other recorded messages.²³ In that Order, the Commission referenced the ongoing Section 255 obligation to provide access to these services, and noted “the technologies to make these calls functionally equivalent are still being developed.”²⁴

Consumer commenters in the instant proceeding convey that CapTel’s near real-time transmission speed and interactive capabilities can, in fact, make compliance with

²¹ SHHH at 4.

²² Hamilton Relay at 1-2.

²³ Improved Services Order at ¶92.

²⁴ Id. at ¶93.

the FCC's new mandate for access to interactive menus and recorded messages more functionally equivalent for VCO relay users. For example, Bishop describes how previous methods he has used to access his work voice mail system, such as with ASL interpreters or via TTY relay, have been "time consuming and energy draining." He explains that "[n]ow with the CapTel, I am able to do it independently...it lessens my daily stress ... my customers start to appreciate the CapTel service as well."

Harrell, Bishop and Priola also note that they have used CapTel to access their voice mail systems at work effectively and efficiently. In addition, Priola describes how the CapTel service enabled her to reach an individual's extension by pressing the extension numbers herself. "It amazed me and I could leave my own message without the CA having to call back to leave the message if I was using the VCO."²⁵

Schiro and McChesney state that with CapTel, there is no need to re-dial due to automated touch-tone technology. In contrast to standard VCO, they are now able to press their selections on the first and only call, without the CA dialing back to make the selection for them because the option "timed out."

G. Access to a More Efficient Telecommunications Employment Tool

As the FCC stated in its Improved Services Order, "TRS is a critical tool for employment..."²⁶ Petition commenters note with great appreciation how CapTel has allowed them to do their jobs more efficiently and effectively.²⁷ A sampling of

²⁵ Priola

²⁶ Improved Services Order at ¶7. "Improving the quality of TRS will enhance employment opportunities for people with hearing and speech disabilities and may contribute to a decrease in their unemployment rate." *Id.*

²⁷ Commenters mentioning the many advantages that CapTel has to offer on the job include Schiro, Webb, Chen, Rose, Brenneman, Willey, Klein, W. Brown, Bishop, K. Smith, McChesney, Ott-Mendiola, Mosher, and R. Brown.

comments submitted to the FCC on employment-related advantages substantiates and confirms CapTel's significant impact:

- ... "I have been using the CapTel at work, and it has made a major impact on my ability to perform my professional duties."
(Ott-Mendiola, Civil Rights Manager, USDA Forest Service)
- ... "CapTel does make my job running much, much more efficient, and it certainly makes a difference." (L. Chen, Census Bureau)
- ... "My other party on the phone has shown such enthusiasm and appreciation that this technology is available and makes business dealings quicker, easier, and more professional." (Mosher, Veterans Administration National Acquisition Center, IL)
- ... "It's made it easier for me to make business calls and explain the service myself in a way that doesn't confuse business people or cause them to hang up the phone thinking it is a phone salesman or some kind of prank call."
(Kerschbaum, University of WI)
- ... "It helps me do my job and go about my business in a way that I remember doing before I lost my hearing." (Judge R. Brown, Appellate Court - WI)
- ... "This device has improved my work performance tremendously, and in fact, has improved my working relationship at Metavante Corporation."
(M. Schiro, Metavante Corporation)
- ... "CapTel has made a difference with my lifestyle in terms of phone dependency. I would never have been able to seek a management job I've always wanted to pursue, if not for the wonderful technology CapTel brings." (McChesney)
- ... "It will advance my career, as well as others.' I'm now able to make sales calls independently and talk with prospective customers, making me feel more empowered to do what I'm paid to do. This is something that will benefit many, many people." (Brenneman)
- ... "This unique system granted me more control over my phone calls. Not only did I grow comfortable using the CapTel for pleasure, but also developed confidence in the ability to make contacts with people who are totally unfamiliar with the system."
(K. Smith, School Psychologist, Milwaukee Public Schools)
- ... "CapTel is the type of phone communication that I have greatly longed for due to the difficulty and expense of trying to use two-line VCO relay systems." (C. Klein)
- ... "People will be able to apply and keep their jobs in the business world because of the CapTel phone." (Willey, Retired Microbiologist, Dept. of Agriculture, Ohio SHHH Coordinator)

IV. CapTel Trials Demonstrate High Customer Acceptance and Compliance With Applicable FCC Minimum Standards

A. Ten CapTel Trials Are Now Underway or Scheduled To Begin

The CapTel Service is currently used daily by hundreds of CapTel state trial participants in programs facilitated by the States of Wisconsin, Maryland, and Virginia, along with the Federal Relay System. The Federal Relay CapTel Trial reaches federal employees in nearly all regions of the country, and includes Gallaudet University and NTID. Additional CapTel trials are imminent. On September 1, 2002, a CapTel trial will begin in the state of Washington. California, Florida, Illinois, Minnesota, and Oregon are also scheduled to conduct CapTel trials late in 2002 and early in 2003. All of these trial offerings allow consumers in these respective states to have the CapTel experience on a limited hours basis.²⁸ As Hamilton notes, trials have “met with encouraging success and acceptance.”²⁹ However, consumers outside these trial states are still deprived of access to this service.

B. CapTel Trials Demonstrate High Words Per Minute (wpm) Accompanied by Low Error Rates

Ultratec’s original petition notes that in CapTel trials our CAs have been able to transcribe in excess of 140 wpm with accuracy rates of 98% or higher. Current trial results in Wisconsin, Maryland, Virginia, and nationally via the Federal Relay reveal that the average over all trial months amongst all CAs is now in excess of 146.94 wpm with error rates of 1.56%. In July 2002, CA performance averages reached 153.78 wpm with accuracy rates of

²⁸ CapTel Trial hours are generally 7 a.m. to 10 p.m. (Central Time) Monday through Friday, Saturday 8a.m. to 10 p.m. (Central Time), and Sunday 1 p.m. to 10 p.m. (Central Time). In October, evening hours will expand during the weekday hours to midnight (Central Time). Most of the trials begin with 9 hours per day/weekday schedules, increasing to the hourly offering mentioned above.

²⁹ Hamilton Relay, pg. 1.

1.58%. This CA performance level far exceeds existing relay performance in both speed *and* accuracy.

In comments to this proceeding, one party has proposed independent monitoring of the error rate of CapTel.³⁰ In actuality, each of the state trial participants (WI, MD, VA, Federal Relay, and soon six other states) are “independent parties” conducting assessments of the CapTel service. Specifically, as part of participation in the trial, each participant is directed to respond to *specific questions* on error rate and comprehension on call evaluation forms.³¹ All of the individual call evaluations received from trial participants are entered into a database and reported to the contracting states on a monthly basis. The data is based on each individual’s impression of each of his or her calls. Analyses of the data contained on these forms have revealed that customer satisfaction with call experience has been very positive.³²

C. CapTel Communications Assistants Meet or Exceed All Applicable Minimum FCC Standards of CA Quality

FCC rules require that communications assistants (CAs) be “sufficiently trained to effectively meet the specialized communication needs of individuals with hearing and speech disabilities; and that CAs have competent skills in typing, grammar, spelling, interpretation of typewritten ASL, and familiarity with hearing and speech disability cultures, languages and etiquettes.”³³ These standards should apply, where applicable, to all CAs handling TRS calls.³⁴

³⁰ Comments of David Coco.

³¹ CapTel trial evaluation sheet questions include, “Did you experience major word errors that confused you during your call? Did you ask the other party for clarification due to “caption” errors? If so, how often? Please list examples of word errors you saw.”

³² Out of 4,631 evaluation responses, 80% responded they never had to ask the other party for clarification. Those who did ask for clarification note that it was rare and typically occurred for only one to three words in a call.

³³ 47 C.F.R. §64.604

³⁴ Certain standards, such as familiarity with typewritten ASL, may not apply to certain types of relay services, such as speech-to-speech relay services. Insofar as CapTel uses CAs that repeat, verbatim, what is said by the hearing person on the call (and *not* the CapTel user), we would similarly not expect this skill to be applicable to CapTel CAs.

Ultratec agrees that standards, training, and monitoring of CAs should be uniform and applicable to all TRS offerings.³⁵

It is important to note that during all CapTel calls, CAs control the automated speech recognition technology for the purpose of inserting corrections to any incorrect words where necessary. Additionally, when words or proper names come up that the computer does not recognize, the CapTel CA types those names or corrections in brackets and continues transcribing via voice recognition.

One commenter to this proceeding has proposed that CAs used for CapTel be given the ability to interrupt the conversation and to ask the speaker to slow down, if needed.³⁶ However, providing the CA with this ability conflicts with the preference of the overwhelming majority of CapTel participants. As noted above, one of the features most favored by CapTel users is the ability to “own” their own calls. As SHHH and others to this proceeding note, it is the ability to take full control of one’s call without the CA ever being “heard” or spoken to, which is one of the most desirable benefits of the CapTel service. Eliminating this feature removes control from the consumer, who may not want the other party to have any clue of his or her hearing disability or even the fact a TRS service is being used. In the event that a CapTel user finds that the captions are coming too fast for his or her taste, that individual can choose to instruct the other party to slow down. Commenters insist this is a strong attribute of CapTel and would argue against allowing spoken intervention by the CA.

V. Ultratec Supports Comprehensive Consumer Education on the CapTel Service

³⁵ One commenter, Coco, raises concerns regarding CA performance levels based on his experience with off-the-shelf Automated Speech Recognition (ARS). Ultratec also originally experienced unacceptably low performance from such systems and therefore developed a highly customized voice recognition system specifically designed for use in the CapTel relay. The speed and accuracy data for the CapTel relay are reported herein.

³⁶ Comments of David Coco.

Ultratec believes that providing consumers with educational materials that allow them to fully understand the way that CapTel works is critical to the success of this service. Accordingly, Ultratec supplies each CapTel user with a user manual, literature and supporting tip sheets on how CapTel works. In addition, Ultratec's website contains information on CapTel at <http://www.ultratec.com/info/CapTel.html>. Ultratec also recognizes the need to alert consumers about the existence of CapTel and would support further outreach and education efforts that are designed to increase awareness of this service.

VI. Minimum Mandatory Standards Not Applicable to CapTel Should Be Waived

A. Mandates Related to Speech-to-Speech, Video Relay Services and Hearing Carry Over Services are Not Applicable to CapTel Services

Those who commented on the subject of waivers fully support Ultratec's position that speech-to-speech relay (STS), video relay service (VRS), and hearing carry over (HCO) are not applicable to the CapTel service. Because CapTel is merely a subset of the VCO service, standards pertaining to VRS (e.g., qualified interpreters, ASL interpretation), STS, and HCO have no relevance to the provision of this service.³⁷

WorldCom does not object to the waiver request, but states that Ultratec did not explain why it is *technically infeasible* to provide STS, VRS, and HCO. Rather than being an issue of technical infeasibility, these relay features simply do not apply to CapTel. Just as HCO does not apply to VCO, nor does it apply to CapTel, as CapTel is an enhanced form of VCO. The same is true for STS. CapTel users speak for themselves and rely on speech-to-text transcription for the response from the party they are speaking to. Because the person using the captioned telephone is speaking into the receiver, this service is not intended for people with difficulty speaking, as those individuals are using CAs specially trained to interpret their speech, and relying on their own hearing to hear the party they are speaking to. Individuals using STS can hear, and thus are not in need of the caption support available through CapTel. Finally, individuals using VRS make use of sign language interpreters to facilitate communications, whereas, CapTel users rely on printed text. Similarly, just as VRS does not provide STS because STS does not utilize signing, nor can CapTel provide VRS, as CapTel is based on text and not on sign language interpreters.

SHHH supports Ultratec's position that none of these services are applicable to CapTel. As SHHH explains, "STS does not involve transcription of speech into text by a CA; neither does HCO, nor VRS. It is not a matter of being technologically infeasible, but rather a matter of whether or not every relay service has to fulfill every other relay service's functionality."³⁸

B. 711 Dialing Requirements

Ultratec submitted its original Petition to the Commission on April 12, 2002. Since that time, extensive research and development activity has been ongoing for the purpose of further developing CapTel's offerings. Information based on trial input has contributed to a more complete understanding of CapTel as an enhanced VCO offering. Because a CapTel user has the ability to directly dial the destination party, the CapTel user never has to dial a relay connection for all outbound CapTel calls. The telephone does this automatically, therefore the access number is only known to the equipment, not the CapTel user, and is therefore irrelevant. In fact, it is not possible for a CapTel user to dial 711 in order to make a CapTel outbound call because the CapTel phone is designed to automatically dial the CapTel service number when the user begins dialing the number of the destination party.

For inbound calls to a CapTel phone, the caller dials a toll free number and is prompted to then dial the number of the person they are calling. As noted above by the many parties commenting on the petition, transparency of the service to the inbound caller is another very important feature of the CapTel service. Allowing the inbound caller to "directly" call the CapTel user with no CA intervention and no delay makes

³⁷ See e.g., Comments of TDI, SHHH, and Hamilton Relay.

³⁸ SHHH, pgs. 2-3

inbound calling seamless and transparent. Although it would be technically possible for an inbound caller to call 711, interface with a CA, and then have the call routed to the appropriate CapTel service center trunk together with the number to dial, such a procedure would add substantial delays and cost to making an inbound CapTel call and would violate the basic objective of keeping the CA totally invisible to the inbound caller. Ultratec will continue to investigate the issues of 711 access for CapTel.

VII. Conclusion

CapTel can truly make a difference for those wishing to use their speech and residual hearing, but who are in need of text support. This service offers a highly advanced technological solution that can assist the Commission in its quest to achieve telephone functional equivalency for individuals with hearing disabilities. Ultratec believes, and we expect the Commission will concur, that the record in this proceeding overwhelmingly shows that the public will be best served by access to this new TRS offering.

To this end, Ultratec requests the Commission issue a ruling that (1) classifies CapTel service as a relay service that is eligible for the recovery of costs associated with its provision, and (2) clarifies that certain Commission requirements for TRS are not applicable to CapTel. Ultratec believes, and we expect the Commission will concur, that the record in this proceeding illustrates that the public will be best served by access to this new TRS offering.

Respectfully Submitted,

Pamela Y. Holmes

Director, Consumer & Regulatory Affairs
Ultratec, Inc.
450 Science Drive
Madison, WI 53711
(608) 238-5400

August 12, 2002